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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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TOWNSEND AND TOWNSEND AND CREW LLP
TWO EMBARCADERO CENTER
8TH FLOOR
SAN FRANCISCO CA 94111-3834

EXAMINER	
SCHNIZER, H	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

FILE COPY

Office Action Summary	Application No. 09/424,498	Applicant(s) SCHWARZ ET AL.	
	Examiner Holly Schnizer	Art Unit 1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-41 and 43-63* is/are pending in the application.

4a) Of the above claim(s) *45-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-41,43 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6 and 9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of the Claims

The Preliminary Amendment and Response to the Restriction Requirement filed August 22, 2001 (Paper No. 11) has been entered. Claim 42 has been cancelled. Claims 31-41 and 43-63 are pending, Claims 45-63 are withdrawn as being drawn to a non-elected invention and Claims 31-41 and 43-44 will be considered in this Office Action.

Election/Restrictions

The Response to the Restriction Requirement filed August 22, 2001 and the Supplemental Response with the Election filed October 16, 2001 (Paper No. 12) have been entered and considered. Applicants' election of Group I, Claims 31-44 with traverse in Paper No. 12 is acknowledged.

Applicants' traversal of the restriction on the basis that the claims, as amended, are not taught or suggested in the prior art and satisfy the unity of invention requirement has been considered but is not deemed persuasive. First, the claims as originally presented lack unity for the reasons cited on p. 3 of Paper No. 8. In addition, Claim 31, even as amended, appears to have been known in the art at the time of the invention (see below) and therefore the technical feature linking the inventions does not constitute a special technical feature as it does not define a contribution over the prior art. Thus, the requirement is still deemed proper and therefore, made FINAL.

Information Disclosure Statement

The Information Disclosure Statement filed March 29, 2000 (Paper No. 6) fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each publication listed that is not in the English language. It has been placed in the application file, but the information contained in References AC-AL has not been considered.

Objections

Claims 31-42 and 44-45 are objected to for the following informalities: The claims refer to a vWF propeptide. This protein would be more accurately identified by its full name "von Willebrand Factor". This objection would be overcome by adding the full name of the protein in front of the acronym in parenthesis in all of the independent claims as follows: "von Willebrand Factor (vWF) propeptide...".

Claim 44 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 34 (see 112, 2nd rejection of Claim 33 below). When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32-34 and 37-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The transitional phrase, "essentially comprised of" in Claim 32 is unclear as to the scope of a claim with respect to what unrecited additional components or steps, if any, are excluded from the scope of the claim. The transitional term "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements or method steps whereas the transitional term "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention (see MPEP 2111.02). Clarification as to the scope of the claim is required. For the purposes of the present Office Action, the claim will be given its broadest interpretation (i.e. "comprising").

Claim 33, and Claims 34 and 38 dependent therefrom, is unclear as to what is meant by the phrase "comprising pro-vWF, said pro-vWF containing said vWF propeptide. A review of the literature appears to indicate that vWF is synthesized as a pre-pro-polypeptide containing a 22-residue signal peptide, a 741 residue pro-peptide, and a 2050 residue mature vWF polypeptide. After synthesis cleavage of the signal peptide forms what is known as the pro-peptide or pro-vWF (see Fisher et al. FEBS Lett (1995) 375: 259, Col. 1, Ref. AT of IDS of Paper No. 6; Leyte et al. Biochem. J. (1991)

274: 257, Col. 1, Ref. AW in IDS of Paper No. 6). Therefore, it appears that pro-vWF is synonymous with vWF propeptide and that Claim 33 does not further limit Claim 31. Clarification is required.

Claim 37 contains the trademark/trade name FEIBA (Immuno AG). Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe Factor VIII inhibitory binding activity and, accordingly, the identification/description is indefinite. In addition, the recitation of "FEIB activity" in Claim 37 is indefinite because the acronym may be used to describe more than one thing. It appears that FEIBA represents Factor VIII Inhibitory Binding Activity and therefore the claim is unclear as to the difference or relationship of "FEIB activity" and "FEIBA". Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 31-33, 35-40, and 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Burnouf-Radosevich et al. (U.S. Patent No. 5,408,039, 1995).

Burnouf-Radosevich et al. teach that pharmaceutical compositions comprising vWF from vWF-enriched plasma derivatives are very well known in the art (Col. 1-Col. 2). Burnouf-Radosevich et al. disclose a highly purified vWF concentrate that is subjected to a solvent-detergent treatment known for its efficiency in destroying lipid enveloped viruses (Col. 5, Example and "Viral Inactivation Treatment"). The vWF is synthesized as a pre-pro-peptide. Upon cleavage of the signal peptide, the pro polypeptide dimerizes, assembles into multimers, and then the propolypeptide is removed by proteolytic cleavage. However, cleavage is not always complete. Therefore, it appears that a vWF plasma derivative, such as disclosed in Burnouf-Radosevich et al. would comprise the vWF pro polypeptide as well as the mature vWF. In addition, Burnouf-Radosevich et al. teach that the composition disclosed therein may also comprise Factor VIII (Col. 5, lines 55-60). Therefore, the claims appear to be anticipated by Burnouf-Radosevich et al.

Claims 31-33, 39-40, and 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Takagi et al. (and Takagi et al. (J. Biol. Chem. (1989) 264(11): 6017-1020; ref. AY of IDS of Paper No. 6).

Takagi et al. disclose a composition comprising vWF propolypeptide isolated from human platelets (see p, 6017, Experimental Procedures). Since the vWF

propolypeptide is a glycoprotein isolated from platelets it is considered a platelet glycoprotein component (clms 39-40).

The present claims are drawn to a product-by-process. As evidenced by the prior art, it appears that the vWF propolypeptide was very well known in the art at the time of the invention. While the vWF propolypeptide composition of the prior art appears to have been made by a process different than that claimed, the vWF propolypeptide known in the art is identical in structure and function to the presently claimed polypeptide and would inherently have the same properties and utilities as the polypeptide presently claimed. Applicants are reminded that something which is old does not become patentable upon the discovery of a new use. The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977) (see MPEP 2112). In the present case, it appears that the claimed compositions are patentably indistinguishable from the prior art. In the alternative, the claimed compositions would be obvious over the prior art as described below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 31-40 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leyte et al. (Biochem. J. (1991) 274: 257-261; ref. AW in IDS of Paper No. 6) and Takagi et al. (J. Biol. Chem. (1989) 264(11): 6017-1020; ref. AY of IDS of Paper No. 6) in view of Burnouf-Radosevich et al. (U.S. Patent No. 5,408,039, 1995).

Leyte et al. teach that the formation of a complex between Factor VIII and vWF is important in the maintenance of normal haemostasis and that some patients suffer from bleeding disorders associated with aberrant interaction between Factor VIII and vWF (p. 257, Col. 2, lines 1-7). Leyte et al. teach the purification of vWF propolypeptide (p. 258-259) and discuss experiments that lead to the conclusion that the propolypeptide is essential in the post-translational processes that lead to the expression of a functional Factor VIII binding site on the mature vWF subunit (see abstract). Leyte et al. also teach that the propolypeptide sequence was well known and could be produced recombinantly using procedures well known in the art (p. 258, Materials and Methods).

Leyte et al. do not teach that the purified vWF propolypeptide has been treated for at least one of virus inactivation or virus removal.

As discussed above, Takagi et al. disclose a composition comprising vWF propolypeptide isolated from human platelets (see p, 6017, Experimental Procedures). Since the vWF propolypeptide is a glycoprotein isolated from platelets it is considered a platelet glycoprotein component (clms 39-40).

Takagi et al. do not teach that the purified vWF propolypeptide has been treated for at least one of virus inactivation or virus removal.

Burnouf-Radosevich et al. teach that viral inactivation of solutions containing vWF were known in the art at the time of the invention (Col. 5, lines 55-60). Burnouf-Radosevich et al. also teach vWF compositions that are used in methods of treatment and contain Factor VIII.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make a composition comprising the vWF propolypeptide as was well known and taught in Leyte et al. and Takagi et al. and treat the composition for virus inactivation or removal as taught in Burnouf-Radosevich et al. One of ordinary skill would have been motivated to do so because vWF compositions are routinely used in methods of treatment, Leyte et al. teach that the vWF propolypeptide is essential for the expression of a functional Factor VIII binding site and that complex formation between Factor VIII and vWF is essential to maintain haemostasis, and as taught in Burnouf-Radosevich et al. virus inactivation or virus elimination would make a safer

composition for administration to patients. Thus, it appears that the claims are unpatentable over the prior art.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leyte et al. (Biochem. J. (1991) 274: 257-261; ref. AW in IDS of Paper No. 6),Takagi et al. (J. Biol. Chem. (1989) 264(11): 6017-1020; ref. AY of IDS of Paper No. 6), and Burnouf-Radosevich et al. (U.S. Patent No. 5,408,039, 1995) as applied to claims 31-40 and 43-44 above, and further in view of Kaufman (U.S. Patent No. 5,198,349, 1993).

The teachings of Leyte et al., Takagi et al. and Burnouf-Radosevich et al. have been described above. As discussed above, Burnouf-Radosevich et al. teach that coagulation diseases are treated with compositions comprising both vWF and Factor VIII (Col. 1, lines 45-50).

Leyte et al., Takagi et al. and Burnouf-Radosevich et al. do not teach that the compositions disclosed therein contain phospholipids.

Kaufman teach that phospholipids stabilize Factor VIII and disclose compositions containing vWF and stabilizing phospholipids (Col. 2, lines 13-15 and 35-37).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to add phospholipids to a composition comprising vWF because compositions of vWF and Factor VIII are known to be used in treating coagulation disorders (see Burnouf-Radosevich et al.) and, as taught in Kaufman, it was well known in the art that phospholipids act as stabilizers of Factor VIII. One of ordinary skill in the

art would have been motivated to add phospholipids to a composition of vWF to make a more stabilizing solution for combining with Factor VIII. Therefore, it appears that the claims are unpatentable over the prior art.

Conclusions

No Claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Schnizer whose telephone number is (703) 305-3722. The examiner can normally be reached on Mon. & Thurs., 8am-5:30pm and Tues. & Wed. 9-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703 308-0196.

Holly Schnizer
November 2, 2001